

WHAT IS CLAIMED IS:

1. An image sending apparatus, comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a load measurement unit to measure the load of the code sequence generation unit;

a parameter generation unit to generate a parameter corresponding to the load; and

a sending unit to send the another code sequence data;

wherein the code sequence generation unit generates the another code sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the load.

2. The image sending apparatus as claimed in claim 1, wherein the parameter is a parameter for determining image resolution or frame rate or image quantization level.

3. The image sending apparatus as claimed in claim 1, wherein the code sequence generation unit includes a plurality of code sequence generation units, and the load corresponds to the number of the code sequence generation units that are operating in parallel.

4. An image sending system, comprising an image sending apparatus and one or more image receiving apparatuses, the image sending apparatus comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a load measurement unit to measure the load of the code sequence generation unit;

a parameter generation unit to generate a parameter corresponding to the load; and

a sending unit to send the another code sequence data to the one or more image receiving apparatuses;

wherein the code sequence generation unit generates the another code sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the load;

the image receiving apparatus comprising:

a receiving unit to receive the another code sequence data from the image sending apparatus;

a decoding unit to decode the another code sequence data to moving image data; and

a display unit to display the moving image data.

5. The image sending system as claimed in claim 4, wherein the parameter is a parameter for determining image resolution or frame rate or image quantization level.

6. The image sending system as claimed in claim 4, wherein the code sequence generation unit includes a plurality of code sequence generation units, and the load corresponds to the number of the code sequence generation units that are operating in parallel.

7. A computer readable medium storing program code for causing an image sending apparatus to perform processes, the computer readable medium comprising:

syntax analysis program code means for analyzing syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more

small regions for each frame and performing hierarchical compression coding on each small region;

code sequence generation program code means for generating another code sequence data from the code sequence data by using the analysis result by the syntax analysis program code means;

load measurement program code means for measuring the load of the code sequence generation program code means;

parameter generation program code means for generating a parameter corresponding to the load;

sending program code means for sending the another code sequence data;

wherein the code sequence generation program code means generates the another code sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the load.

8. An image sending apparatus used in an image sending system including the image sending apparatus and one or more image receiving apparatuses, the image sending apparatus comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a parameter generation unit to generate a parameter according to a sum of data reading amounts in the one or more image receiving apparatuses;

a sending unit to send the another code sequence data to the one or more image receiving apparatuses;

wherein the code sequence generation unit generates the another code

sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the sum of data reading amounts.

9. The image sending apparatus as claimed in claim 8, the image sending apparatus further comprising a receiving unit to receive the data reading amounts from the one or more image receiving apparatuses, wherein a data reading amount is an amount of code sequence data read by an image receiving apparatus per a unit time.

10. The image sending apparatus as claimed in claim 8, wherein the parameter is a parameter for determining image resolution or frame rate or image quantization level.

11. The image sending apparatus as claimed in claim 8, wherein the parameter generation unit generates the parameter C by using an equation $C = (\sum A_n)/B$ in which A_n ($n=1, 2, 3, \dots$) indicates an amount of code sequence data read by an image receiving apparatus and B indicates a maximum data sending capability of the image sending apparatus.

12. An image receiving apparatus for receiving code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region, the image receiving apparatus comprising:

a decoding unit to decode the code sequence data;

a data reading amount detection unit to detect an amount of code sequence data read per a unit time; and

a sending unit to send the amount to an image sending apparatus that sent the code sequence data.

13. An image sending system including an image sending apparatus and one or

more image receiving apparatuses, the image sending apparatus comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a parameter generation unit to generate a parameter according to a sum of data reading amounts in the one or more image receiving apparatuses; and

a sending unit to send the another code sequence data to the one or more image receiving apparatuses;

wherein the code sequence generation unit generates the another code sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the sum of data reading amounts.

the image receiving apparatus comprising:

a decoding unit to decode the another code sequence data;

a data reading amount detection unit to detect an amount of the another code sequence data read per a unit time; and

a sending unit to send the amount to the image sending apparatus that sent the another code sequence data.

14. A computer readable medium storing program code for causing an image sending apparatus to perform processes, wherein the image sending apparatus is used in an image sending system including the image sending apparatus and one or more image receiving apparatuses, the computer readable medium comprising:

syntax analysis program code means for analyzing syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small

region;

code sequence generation program code means for generating another code sequence data from the code sequence data by using the analysis result by the syntax analysis program code means;

parameter generation program code means for generating a parameter according to a sum of data reading amounts in the one or more image receiving apparatuses;

sending program code means for sending the another code sequence data to the one or more image receiving apparatuses;

wherein the code sequence generation program code means generates the another code sequence data by using the parameter such that the data amount of the another code sequence data to be sent per a unit time is adjusted according to the sum of data reading amounts.

15. A computer readable medium storing program code for causing an image receiving apparatus to perform processes, wherein the image receiving apparatus is for receiving code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region, the computer readable medium comprising:

decoding program code means for decoding the code sequence data;

data reading amount detection program code means for detecting an amount of code sequence data read per a unit time; and

sending program code means for sending the amount to an image sending apparatus that sent the code sequence data.

16. An image sending apparatus, comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for

each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a load measurement unit to measure the load of the code sequence generation unit;

a difference amount generation unit to generate a difference amount corresponding to the load, wherein the difference amount is a difference amount of data between the code sequence data and the another code sequence data to be generated;

a sending unit to send the another code sequence data;

wherein the code sequence generation unit generates the another code sequence data such that a difference amount between the code sequence data and the another code sequence data becomes the difference amount generated by the difference amount generation unit.

17. The image sending apparatus as claimed in claim 16, wherein the code sequence generation unit generates the another code sequence data by using a quantization table that is selected according to the difference amount.

18. The image sending apparatus as claimed in claim 17, wherein the code sequence generation unit selects the quantization table from quantization tables by calculating each difference amount between the code sequence data and another code sequence data to be generated for each quantization table and selecting a quantization table by which the calculated difference amount corresponds to the difference amount generated by the difference amount generation unit.

19. The image sending apparatus as claimed in claim 17, wherein the code sequence generation unit generates the another code sequence data by discarding codes from the code sequence data according to the quantization table.

20. The image sending apparatus as claimed in claim 16, wherein the code sequence generation unit generates the another code sequence data by using a specified frame rate in addition to the difference amount.

21. The image sending apparatus as claimed in claim 16, the image sending apparatus further comprising a motion amount detection unit for detecting an image motion amount in the code sequence data, wherein the code sequence generation unit generates the another code sequence data by using the image motion amount in addition to the difference amount.

22. An image sending system, comprising an image sending apparatus and one or more image receiving apparatuses, the image sending apparatus comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result by the syntax analysis unit;

a load measurement unit to measure the load of the code sequence generation unit;

a difference amount generation unit to generate a difference amount corresponding to the load, wherein the difference amount is a difference amount between the code sequence data and the another code sequence data to be generated; and

a sending unit to send the another code sequence data to the one or more image receiving apparatuses;

wherein the code sequence generation unit generates the another code sequence data such that a difference amount between the code sequence data and the another code sequence data becomes the difference amount generated by the difference amount

generation unit;

the image receiving apparatus comprising:

a receiving unit to receive the another code sequence data;

a decoding unit to decode the another code sequence data to moving images; and

a display unit to display the moving images.

23. A computer readable medium storing program code for causing an image sending apparatus to perform processes, the computer readable medium comprising:

syntax analysis program code means for analyzing syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

code sequence generation program code means for generating another code sequence data from the code sequence data by using the analysis result by the syntax analysis program code means;

load measurement program code means for measuring the load of the code sequence generation method;

difference amount generation program code means for generating a difference amount corresponding to the load, wherein the difference amount is a difference amount of data between the code sequence data and the another code sequence data to be generated; and

sending program code means for sending the another code sequence data;

wherein the code sequence generation program code means generates the another code sequence data such that a difference amount between the code sequence data and the another code sequence data becomes the difference amount generated by the difference amount generation program code means.

24. An image sending apparatus, comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result of the syntax analysis unit such that a difference amount between the code sequence data and the another code sequence data becomes a specified difference amount;

a sending unit to send the another code sequence data to an image receiving apparatus.

25. The image sending apparatus as claimed in claim 24, wherein the specified difference amount is determined by the image receiving apparatus according to a reading amount of code sequence data sent from the image sending apparatus, and is sent from the image receiving apparatus.

26. The image sending apparatus as claimed in claim 24, wherein the code sequence generation unit generates the another code sequence data by using a quantization table that is selected according to the specified difference amount.

27. The image sending apparatus as claimed in claim 26, wherein the code sequence generation unit selects the quantization table from quantization tables by calculating each difference amount between the code sequence data and another code sequence data to be generated for each quantization table and selecting a quantization table by which the calculated difference amount corresponds to the specified difference amount.

28. The image sending apparatus as claimed in claim 26, wherein the code sequence generation unit generates the another code sequence data by discarding codes from

the code sequence data according to the quantization table.

29. The image sending apparatus as claimed in claim 24, wherein the code sequence generation unit generates the another code sequence data by using a specified frame rate in addition to the specified difference amount.

30. The image sending apparatus as claimed in claim 24, the image sending apparatus further comprising a motion amount detection unit to detect an image motion amount, wherein the code sequence generation unit generates the another code sequence data by using the image motion amount in addition to the specified difference amount.

31. An image receiving apparatus for receiving code sequence data from an image sending apparatus, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region, the image receiving apparatus comprising:

- a decoding unit to decode the code sequence data;

- a data reading amount detection unit to detect an amount of code sequence data read by the image receiving apparatus per a unit time;

- a difference amount generation unit to generate a difference amount according to the data reading amount, wherein the difference amount is a difference amount between code sequence data that is originally stored in the image sending apparatus and another code sequence data to be generated from the originally stored code sequence data by the image sending apparatus; and

- a sending unit to send the difference amount to the image sending apparatus.

32. An image sending system, comprising an image sending apparatus and an image receiving apparatus, the image sending apparatus comprising:

a syntax analysis unit to analyze syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

a code sequence generation unit to generate another code sequence data from the code sequence data by using the analysis result of the syntax analysis unit such that a difference amount between the code sequence data and the another code sequence data becomes a specified difference amount; and

a sending unit to send the another code sequence data to the image receiving apparatus;

the image receiving apparatus comprising:

a decoding unit to decode the another code sequence data;

a data reading amount detection unit to detect an amount of the another code sequence data read by the image receiving apparatus per a unit time;

a difference amount generation unit to generate the specified difference amount according to the data reading amount; and

a sending unit to send the specified difference amount to the image sending apparatus.

33. A computer readable medium storing program code for causing an image sending apparatus to perform processes, the computer readable medium comprising:

syntax analysis program code means for analyzing syntax of code sequence data, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region;

code sequence generation program code means for generating another code sequence data from the code sequence data by using the analysis result of the syntax analysis unit
program code means such that a difference amount between the code sequence data and the

another code sequence data becomes a specified difference amount;

sending program code means for sending the another code sequence data to an image receiving apparatus.

34. A computer readable medium storing program code for causing an image receiving apparatus to perform processes, wherein the image receiving apparatus is for receiving code sequence data from an image sending apparatus, wherein the code sequence data is obtained by dividing moving image data into one or more small regions for each frame and performing hierarchical compression coding on each small region, the computer readable medium comprising:

decoding program code means for decoding the code sequence data;

data reading amount detection program code means for detecting an amount of code sequence data read by the image receiving apparatus per a unit time;

difference amount generation program code means for generating a difference amount according to the data reading amount, wherein the difference amount is a difference amount between code sequence data that is originally stored in the image sending apparatus and another code sequence data to be generated from the originally stored code sequence data by the image sending apparatus; and

sending program code means for sending the difference amount to the image sending apparatus.